

Amendments to the Claims

1. (Currently Amended) A method for enhancing image processing for a color reprographic system, the method comprising:

scanning a scan target having known characteristics with a scanner to generate scanner data;

detecting a gray balance distortion in the scanner data with respect to the known characteristics and generating scanner gray balance parameters when the gray balance distortion exceeds a balance threshold;

detecting a color distortion in the scanner data with respect to the known characteristics and generating scanner color parameters;

printing a printer target from a digital target with a printer;

scanning the printed target with the scanner to generate printer data;

correcting the scanned printer target based upon parameters generated for the scanner;

and

~~detecting a halftone frequency associated with the scanned printer target to select a descreen filter.~~

determining a halftone frequency of the printer based upon the corrected scanned printer target; and

selecting a descreen filter based upon the halftone frequency of the printer.

2. (Original) The method of claim 1, further comprising detecting a skew in the scanner data with respect to the known characteristics and generating skew parameters when the skew exceeds a skew threshold.

3. (Original) The method of claim 2, wherein detecting the skew comprises detecting a rotation of the scanned target with respect to the scanner data.

4. (Original) The method of claim 1, further comprising detecting a color fringe with respect to the known characteristics and generating scanner fringe parameters when the color fringe exceeds a color fringe threshold.

5. (Original) The method of claim 4, wherein detecting the color fringe comprises evaluating red, green, and blue pixels in an outline area of a gray patch.

6. (Original) The method of claim 1, further comprising detecting distortion associated with gray balance of the printer and generating parameters when a gray patch in the scanned printer target has a colorcast.

7. (Original) The method of claim 1, wherein scanning the scanner target comprises scanning a standard IT8 target.

8. (Original) The method of claim 1, wherein detecting the gray balance distortion comprises determining a difference between the color values for red, green, and blue pixels generated by the scanner and the known characteristics associated with a gray patch.

9. (Original) The method of claim 1, wherein detecting the color distortion comprises generating a curve for a hue based upon the color distortion.

10. (Original) The method of claim 1, wherein printing the printer target comprises printing a step wedge.

11. (Currently Amended) The method of claim 1, wherein ~~detecting~~ determining the halftone frequency of the printer further comprises determining that ~~selecting a descreen filter when the~~ halftone frequency of the printer is coarse.

12 - 25. (Cancelled)

27. (Original) An apparatus for enhancing image processing for a reprographic system, the apparatus comprising:

a scanner detector to compare color image data with target data to detect differences between the color image data and the target data with respect to a gray balance distortion of a gray patch and a scanner color distortion of color values of pixels in the color image data, and to generate scanner correction parameters to compensate for the scanner color distortion and for the gray balance distortion of a scanner when the gray balance distortion exceeds a balance threshold, when the color image data is generated from a scan of a scanner target associated with the target data via the scanner;

a printer detector to detect a halftone frequency with a printer based upon a pattern of pixels in the color image data and differences between the color image data and the target data with respect to a printer color distortion of color values of pixels in the color image data, and to generate printer correction parameters to describe the printer color distortion and the halftone frequency when the halftone frequency associated with the printer is below a threshold frequency, when the color image data is scanned from a printed target from the printer; and

an image adjuster coupled with the scanner detector and the printer detector to adjust pixels of the color image data for distortions based upon the scanner correction parameters generated for the scanner when the scanner is associated with the color image data and the printer correction parameters generated for the printer when the printer is associated with the color image data, and to apply a descreen filter associated with the halftone frequency to adjust pixels of the color image data when the color image data is to be printed by the printer.

28. (Original) The apparatus of claim 27, further comprising a user interface coupled with the scanner detector and the printer detector to associate user preferences with user parameters and coupled with the image adjuster to modify the color image data based upon the user parameters.

29. (Original) The apparatus of claim 27, wherein the printer detector comprises a gray balance detector to detect a gray balance distortion in the color image data with respect to the target data when the color image data is generated from a scan of the printer target and to generate parameters to correct for the gray balance distortion.

30. (Original) The apparatus of claim 27, wherein the image adjuster comprises a skew detector to detect a skew the color image data with respect to the target data when the color image data is generated from a scan of the scanner target and to generate parameters to correct for the skew.

31. (Original) The apparatus of claim 27, wherein the image adjuster comprises a data compressor to compress data to send to the printer.

32. (Original) The apparatus of claim 27, wherein the image adjuster comprises a page segmenter to separate text data from the color image data to process the text data separately.

33. (Original) The apparatus of claim 32, wherein the page segmenter comprises:
a scaler to scale the text data and a binarizer coupled with the scaler to binarize the text data.

34. (Original) The apparatus of claim 27, wherein the image adjuster comprises edge enhancement to enhance edges associated with the color image data.

35. (Currently Amended) A computer readable medium tangibly embodying programmed instructions which, when executed by a computer system, are operable for enhancing image processing for a color reprographic system, the method comprising: ~~A machine-accessible medium containing instructions, which when executed by a machine, cause said machine to perform operations, comprising:~~

scanning a scan target having known characteristics with a scanner to generate scanner data;

detecting a gray balance distortion in the scanner data with respect to the known characteristics and generating scanner balance parameters when the gray balance distortion exceeds a balance threshold;

detecting a color distortion in the scanner data with respect to the known characteristics and generating scanner color parameters;

printing a printer target from a digital target with a printer;

scanning the printed target with the scanner to generate printer data;

correcting the scanned printer target based upon parameters generated for the scanner;

~~and~~

~~detecting a halftone frequency associated with the scanned printer target to select a descreen filter.~~

determining a halftone frequency of the printer based upon the corrected scanned printer target; and

selecting a descreen filter based upon the halftone frequency of the printer.

36. (Currently Amended) The ~~machine-accessible medium~~ method of claim 35, further comprising:

receiving an instruction to copy a page via a scanner and a printer;

selecting an image processing technique from a set of image processing techniques based upon detected characteristics of the printer and the scanner;

configuring the image processing technique based upon the detected characteristics;

scanning the page;

correcting the page data based upon the configured image processing technique; and

printing the page data with the printer.

37. (Original) The method of claim 36, wherein correcting the page data comprises correcting the page data with skew parameters when a skew distortion of the scanner data exceeds a skew threshold.

38. (Original) The method of claim 36, wherein correcting the page data comprises enhancing edges in the page data.

39. (Original) The method of claim 36, wherein correcting the page data comprises adjusting color values of the page data based upon a user input.

40. (Currently Amended) The ~~machine-accessible medium~~ method of claim 35, further comprising:

- receiving page data to print with the printer;
- separating black data represented by pixels in a color space and color image data from the page data;
- binarizing the black data to convert the black data to black color values;
- determining whether the halftone frequency associated with the scanned printer target interacts with a halftone frequency associated with the page data;
- filtering the color image data with a halftone frequency filter associated with a halftone frequency of the page data when the halftone associated with the page data is determined to interact with the halftone frequency associated with the scanned printer target;
- correcting the color image data with the printer correction parameters; and
- printing a combination of the binarized black text data and the corrected color image data via the printer.

41. (Original) The method of claim 40, further comprising compressing the page data for transmission to the printer.